

ABSTRACT OF THE DISCLOSURE

An apparatus and method for controlling a duplication structure of a Base station Transceiver Subsystem (BTS) is provided. The BTS has N number of sectors including a first sector to an Nth sector and M number of Frequency Assignments (FAs) including a first FA to an Nth FA. The apparatus and method includes N number of power dividers, each of which has M number of output ports and one redundancy output port, each of the power dividers dividing an input signal into equal-power signals each having $1/(M+1)$ power and outputting the power-divided signals through the M number of output ports and one redundancy output port. The apparatus and method further includes $(N \times M)$ number of receivers for demodulating signals outputted from the output ports of the N number of power dividers, respectively; a redundancy receiver for demodulating a signal which has been processed by and is switched over from one of the $(N \times M)$ number of receivers according to a predetermined control; a switch connected to each of redundancy output ports of the N number of power dividers, the switch connecting a signal outputted from one of the redundancy output ports to the redundancy receiver according to a predetermined control; and a controller which monitors operation states of the $(N \times M)$ number of receivers and controls the switch to connect a redundancy signal to the redundancy receiver when the controller detects one abnormally-operating receiver from among the $(N \times M)$ number of receivers, the redundancy signal being outputted from a redundancy output port of a power divider connected to the abnormally-operating receiver.

25